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THE CLINICAL CENTER
DIVISION OF RESEARCH GRANTS

May 17, 1956

Dr. Joshua Lederberg
The University of Wisconsin
College of Agriculture
Department of Genetics
Madison 6, Wisconsin

Dear Dr. Lederberg:

I heartily appreciated your generous supply of E. coli strains (W3092, W3094 and W3142) and reprints of your papers.

I have started to investigate the enzyme distribution in these organisms. I have not completed the preliminary survey study, but it seems W3092 and W3142 are different in the point of the enzymatic block of galactose metabolism than the other Gal- strains, that is, galactose phosphate transferase seems to be present in W3092 and #3142 contrary to other Gal- strains tested. I think it is encouraging

As to your request of quantitative data for the study of the enzyme distribution in these organisms, more repeating experiments and data obtained by a different kind of technique would be desirable. As the enzymatic assay system for galactose metabolizing enzymes involves various complications due to the nature of the crude extract used, it, therefore, requires the application of several different assay systems in order to conclude the presence or absence of a particular enzyme. For example, the activity of pyrophosphate uridyl transferase in the crude extracts of E. coli is so weak that it is difficult to conclude if it is there or not.

I am going to write to you as soon as we have obtained more conclusive data on these points.

The letter and reprints you have sent to us are very helpful, but I still have a question in my mind. That is, how you differentiated and isolated these Gal-strains. If you

could answer the following questions, I shall be very grateful.

1. Do these Gal- strains have anything to do with Lac- strains you described in the Cold Spring Harbour Symposia (1951)?

2. Where can I find your report on the basis and the description of the differentiation and isolation of these Gal- strains (Gal₁- to Gal₈-)?

I thank you again for your generous help in carrying this project.

Yours very sincerely,

Kiyoshi Kurahashi

Kiyoshi Kurahashi

KK:lh